

REMARKS

The specification has been amended to include headings in accordance with US practice.

The Abstract of the Disclosure has been amended to eliminate reference numbers and to comply with MPEP 608.01(b).

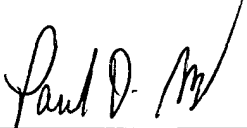
The claims have been amended to removed all multiply dependencies therefrom and to place them into proper U.S. format.

Consideration and allowance of application is respectfully requested.

Attached hereto is a marked up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "Version With Markings to Show Changes Made."

Respectfully submitted,

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Date



Paul D. Greeley
Attorney for Applicant(s)
Registration No. 31,019
Ohlandt, Greeley, Ruggiero & Perle, L.L.P.
One Landmark Square, 10th Floor
Stamford, CT 06901-2682
(203) 327-4500

VERSION WITH MARKINGS TO SHOW CHANGES MADE

In The Specification

Please amend the specification as follows:

On page 1, between lines 2 and 3, insert --- 1. **Field of the Invention** ---.

On page 1, between lines 7 and 8, insert --- 2. **Discussion of the Background Art** ---.

On page 2, between lines 27 and 28, insert --- **SUMMARY OF THE INVENTION** ---.

On page 5, between lines 26 and 27, insert

--- BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a schematic illustration of a data tag signal recover apparatus according to the prior art; and

Fig. 2 is a schematic diagram of a data tag signal recovery apparatus according to the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT ---.

In The Abstract

Please amend the abstract as follows:

APPARATUS AND METHOD FOR DATA TAG SIGNAL RECOVERY

ABSTRACT OF THE DISCLOSURE

In an optical communications system, it is known for system diagnosis, to label a data stream with a data tag signal comprising information such as the originating laser device of the data stream. In order to recover the data tag signal from the data stream it is known to remove the data tag signal using a sense resistor in the voltage bias path of a photodetector employed to receive the data stream. Such a method complicates accurate biasing of the photodetector. The present invention therefore provides a data tag recovery apparatus (50) comprising a photodetector (54) to receive an optical signal (120) comprising a data input signal and a data tag input signal. The photodetector (54) is coupled to an amplifier (58) having outputs (60, 62) coupled to a data output module (64) and a data tag output module (90) arranged to recover the data input signal and the data tag input signal respectively from the data path of the photodetector (54).

(Figure 2)

In The Claims

Please amend the claims as follows:

1. (Amended) A data tag recovery apparatus (50) comprising:

a photodetector (54) for generating an output signal in response to a received optical signal (120) comprising a data input signal and a data tag input signal, the data tag input signal having a different frequency to the data input signal;

an amplifier-(58) arranged to receive the output signal and generate an amplified signal; and

a data output module-(64) being coupled to an output of the amplifier-(58) for generating a data output signal corresponding to the data input signal;

~~characterized in that:~~ wherein a data tag output module-(90), having a frequency range corresponding to the frequency range of the data tag input signal, being coupled to the output of the amplifier-(58) for generating a data tag output signal corresponding to the data tag input signal.

2. (Amended) A data tag recovery apparatus-(50) as claimed in Claim 1, wherein the photodetector-(54) is a PIN photodiode or an avalanche photodiode.

3. (Amended) A data tag recovery apparatus-(50) as claimed in Claim 1 ~~or Claim 2~~, wherein the amplifier-(58) is a transimpedance amplifier.

4. (Amended) A data tag recovery apparatus as claimed in Claim 3, wherein the output of the amplifier-(58) is a differential output-(60, 62).

5. (Amended) A data tag recovery apparatus-(50) as claimed in any one of the preceding claims, wherein the data output module-(64) comprises a postamplifier (72) and means for AC coupling the postamplifier-(72) to the amplifier (58).

6. (Amended) A data tag recovery apparatus~~(50)~~ as claimed in~~any one of the preceding claims~~ claim 1, wherein the data tag output module~~(90)~~ comprises a low frequency amplifier~~(100)~~ and means for AC coupling the low frequency amplifier~~(100)~~ to the amplifier~~(58)~~.

7. (Amended) A data tag recovery apparatus as claimed in Claim 4, wherein the low frequency amplifier~~(100)~~ is an operational amplifier.

8. (Amended) A data tag recovery apparatus as claimed in~~any one of the preceding claims~~ claim 1, wherein the data input signal is in the frequency range of four decades below the bit rate of the data input signal.

10. (Amended) A data tag recovery apparatus as claimed in Claim 6, wherein the data tag input signal is at a frequency of substantially about 250 kHz for a 2.488 Gbit system.

11. (Amended) A method of recovering a data tag signal, the method comprising the steps of:

generating an output signal in response to a received first input signal comprising a data input signal and a data tag input signal, the data tag input signal having a different frequency to the data input signal;

amplifying the output signal to generate an amplified signal; and

processing the amplified signal to generate a data output signal

corresponding to the data input signal;

characterised by: wherein processing the amplified signal is processed to generate a data tag output signal corresponding to the data tag input signal.